

1.1 Compare the ranking of farm/ranch work-related fatalities with other hazardous industries, such as:

- Mining
- Construction
- Fire fighting
- Truck driving

1.2 Identify at least five of the following reasons why farm/ranch work is so hazardous.

- Exposure to hazardous machinery
- Isolated worksites
- Workers often work alone
- Diversity of workforce, especially age
- Exposure to large and/or aggressive animals
- Exposure to toxic chemicals, dusts, and gases
- Exposure to adverse weather
- Worksite and homesite (usually the same location)
- Limited access to emergency services

1.3 Identify the following types of hazards that are most frequently involved in fatal and disabling farm/ranch injuries.

- Tractor operation
- Machinery operation
- Livestock handling
- Operating or being transported in trucks, ATVs, utility vehicles, and other vehicles

1.4 Identify at least five types of agricultural equipment, excluding the tractor, that are most frequently involved in serious farm-related injuries.

- Balers
- Rotary mowers
- Combines
- Auger-elevators
- Manure spreaders
- Grain grinder-mixers Total Mixed Ration (TMR)

1.5 Compare the similarities and differences in safety features found on agricultural tractors versus pick-up trucks.

- ROPS (Rollover Protective Structures) on some trucks and tractors
- Seat belts
- Horn
- Lights
- Mirrors
- Neutral start safety switch
- Shielding
- Slip resistant surfaces
- Environmentally controlled operator station
- Operator's manual

1.6 Identify at least five characteristics of youth that cause them to be at greater risk of injury while performing farm/ranch work.

- Knowledge of hazards
- Coordination
- Experience
- Size
- Maturity
- Strength
- Endurance

1.7 Identify at least three of the following operator characteristics that contribute to an increased risk of injury when operating agricultural tractors and machinery.

- Extreme emotions
- Lack of knowledge/experience
- Fatigue
- Influence of drugs or alcohol
- Preoccupation

1.8 Identify at least five of the following characteristics of agricultural equipment that can increase the risk of operator or bystander injury.

- High operating speed
- Aggressive components
- Power
- Size and weight of equipment
- Exposed functional components
- Potential to throw material
- Energized components
- Unstable

1.9 Identify and locate the following basic types of potential machine hazards found on agricultural tractors and machinery.

- Pinch points
- Crush points
- Wrap points
- Cutting points
- Shear points
- Pull-in points
- Free-wheeling components
- Thrown objects
- Stored energy
- Slips and falls
- Thermal energy
- Chemical energy

1.10 Identify at least five of the following environmental hazards that can increase the likelihood of injury or disease while performing farm/ranch work.

- Darkness
- Sunlight
- Heat and cold
- Noise
- Adverse weather (snow, rain, wind)
- Dust and toxic fumes
- Vibration

1.11 Explain at least three of the following basic characteristics of a safe tractor and machinery operator.

- Knowledge of hazards
- Patience
- Civility/courtesy
- Self-control
- Confidence
- Cautious
- Consideration of self, others, animals, property, and the environment

1.12 Describe the following characteristics of clothing or dress appropriate for the safe tractor and machinery operator.

- Close-fitting material
- No loose strings
- Protection for the feet
- Protection from sun
- Temperature appropriate

1.13 Explain the applicable state and federal regulations that employers must comply with when hiring youth under the age of 16 to perform farm and ranch-related work, including the following:

- Required to pay minimum wage for work performed
- Restricted hours of employment
- Work assigned cannot interfere with school attendance
- Youth cannot be assigned to perform certain hazardous tasks without certification of appropriate training
- Required supervision
- Prohibited exposure to toxic chemicals

1.14 Identify the 11-specific farm/ranch tasks that have been identified by the Fair Labor Standards Act (FLSA) as being particularly hazardous for youth under 16 and identify which can be performed with training and which are considered too hazardous for any youth under 16.

Can be performed with appropriate training:

- Operating tractors over 20 PTO hp (exemption available)
- Operating PTO-operated machinery (exemption available)

Cannot be performed for hire until age 16:

- Operating specialized powered machines, including trencher, earthmoving equipment, fork lift, potato combine, powered circular, band, or chainsaw
- Working with breeding livestock including bulls, boars, and stallions
- Working in wood lots with logs over 6 inches in butt diameter
- Working on ladders and scaffolds at heights over 20 feet
- Operating a vehicle to transport passengers or riding on a tractor as a passenger or helper
- Working inside toxic atmospheres or confined spaces including silos, grain bins, manure pits, and fruit storage
- Handling or applying chemicals classified as Category I or II
- Handling or using a blasting agent (explosive)
- Transporting, transferring, or applying anhydrous ammonia